

5, 6 B1  
1. A computer implemented method for generating a plurality of bit maps suitable for high-speed printing comprising the steps of:

5 (a) providing a page description code specification, the page description code specification defining at least one data area, and the page description code further defining a graphics state corresponding to the data area, the graphics state including at least one attribute which controls the appearance of data in the data area;

(b) interpreting the page description code specification, and during the interpretation step, identifying the data area defined by the page description code specification;

10 (c) upon the identification of the variable data area in step (b), applying the graphics state corresponding to the data area to a set of alphanumeric characters so as to generate a plurality of character bit maps;

(d) storing the plurality of character bit maps;

(e) retrieving a variable data item from a plurality of variable data items;

(f) associating the variable data item with the plurality of character bit maps;

15 (g) generating a variable data bit map for the variable data using the character bit maps;

and

(h) repeating steps (e) through (g) for remaining variable data items in the plurality of variable data items, whereby the stored character bit maps are used repeatedly to generate a plurality of variable data bit maps.

2. The computer implemented method of claim 1, wherein the page description code specification represents a template and includes a static data area, and the computer implemented method further comprises the steps of:

5 executing portions of the page description code specification corresponding to the static data area to generate a template bit map; and

merging each of the plurality of the variable data bit maps into clean copies of the template bit map to create a plurality of merged bit maps.

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3. The computer implemented method of claim 1, wherein the identifying step includes the step of detecting predefined characters within a text string defined in the page description code specification.

4. A computer implemented method for generating a reusable template bit map suitable for high-speed variable printing, comprising the steps of:

generating a page description code specification, the page description code specification defining at least one variable data area and at least one static data area;

5 interpreting the page description code specification, and during the interpretation step, generating a bitmap of the static data area and adding the bitmap of the static data area to a template bitmap;

identifying the variable data area, and

10 responsive to the identification of the variable data, not adding a bitmap of the variable data area to the template bitmap; and

saving the template bitmap, whereby copies of the template bitmap can be continuously accessed to create a plurality of variable data bitmaps.

5. A computer implemented method of associating a data area defined in a page description language specification with a plurality of variable data items in a merge file, comprising the steps of:

5 providing a field name in the merge file associated with the plurality of variable data items;

monitoring data areas defined in the page description language specification for a character string matching the field name;

responsive to a detection of the character string matching the field name, associating a data area containing the character string with the plurality of variable data items in merge file.

6. The computer implemented method of claim 5, wherein the monitoring step is performed during a step of interpreting the page description language specification.

7. The computer implemented method of claim 6, wherein the step of interpreting the page description language specification includes the step of generating bit maps for data areas defined in the page description language specification.

8. The computer implemented method of claim 7, wherein, responsive to a detection of the character string matching the field name, the step of interpreting the page description language specification includes the step of not generating a bit map for the data containing the character string.

9. The computer implemented method of claim 8, wherein, responsive to a detection of the character string matching the field name, the step of interpreting the page description language specification further includes the step of caching a graphic state for the data area containing the character string, wherein the cached graphic state can be used repeatedly to generate a plurality of variable data bit maps for the plurality of variable data items associated with the field name.

10. A computer implemented method of associating a data area defined in a page description language specification with a plurality of variable data items in a merge file, comprising the steps of:

providing a field name in the merge file associated with the plurality of variable data items;

monitoring data areas defined in the page description language specification for a special character, wherein the special character has a predetermined relationship with a character string matching the field name;

responsive to a detection of the special character, identifying the character string; and

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associating a data area containing the special character with the plurality of variable data items in merge file.

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